



THOMAS G. NEWMAN, Editor.

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## EDITORIAL BUZZINGS.

**Flowers.**—Just as the cold wave struck Chicago last week, we received by mail a nice bouquet of flowers from Louisiana—from our friend J. W. Winder, we expect. He usually does some such things. Welcome.

**"Are the Bees our Friends?"**

This is the subject assigned to Mr. Eugene Secor, for discussion at the annual meeting of the Iowa Horticultural Society at Des Moines, on Thursday of next week. We all expect something good from our friend Secor, and we have no doubt this will be "extra good." We shall present it to our readers as soon as that meeting is over.

**Only a Few** complete volumes of the BEE JOURNAL for 1887 are left, and those of our new subscribers who want to secure them should send for them at once. We supply the numbers for 1887 and 1888 for \$1.75 until all of the former are gone.

**Foul Brood** is a dire calamity wherever it makes its appearance. Our friend, Mr. A. I. Root, says he has spent nearly a thousand dollars in experimenting in order to eradicate it. He admits that what we have often advised (viz: a total destruction of the hives, bees, etc.) would have been cheaper and more satisfactory. Many others have found out by experience that this would have saved them money as well as much annoyance. If the larva is elastic and rosy it is a sure indication of foul brood. This is a sure test, but the odor is not to be relied upon, for there is one kind of the disease that is known as "odorless foul brood."

**Mr. T. W. Cowan**, in a recent letter to us from Switzerland, his winter residence, remarks as follows concerning the weather there:

We are in the midst of winter, but as yet we have had no snow, and the temperature is very mild, and more like spring than winter. I am afraid our Canadian toboggans will not be of much use here, but the children go half-an-hour's walk from here, up on higher ground, where there is plenty of snow and skating.

Then, in reference to the re-organization of the "North American Bee-Keepers' Society," and of his being elected a member thereof, he adds:

I see that you brought up the question of organization at the convention, and that you have proposed to organize your Society on the same lines as ours, and that the "rules" you propose are a modification of ours. We have found them to work well, and at the present time we could not better them. If there is any information you wish at any time about them, I shall be pleased to give it.

I have also seen the resolution passed by your Society, making me an honorary member. I am very much obliged to the members for doing so, and have written to Dr. Mason, asking him to convey my thanks, as he is the newly elected President.

The official notification sent by the Secretary, Mr. W. Z. Hutchinson, had not reached Mr. Cowan when he wrote the above. The letters passed one another in the mails. The cordial feeling existing between the apiarists of the two Continents, is a matter for congratulation, and we trust it may long continue. We have a lively interest in both Continents—being born in one and reared in the other.

**We Understand** that an effort is being made to have the United States Government include in its free distribution of seeds, the celebrated Chapman Honey Plant. Certainly bee-keepers should reap some benefit in this way as well as other avocations. We hope to hear of the success of the effort. Mr. Chapman has harvested 28 bushels of the seed, and the Government should scatter at least that much, and thus assist the pursuit, the same as it does others.

**Horticulture and Bees.**—At the recent meeting of the Ohio State Horticultural Society there was nothing in the programme about bees, and Dr. A. B. Mason gave them a good stirring up about it, by calling attention to the benefit "our pets" are to the horticulturist. We shall have proper recognition at the next annual meeting. Dr. Mason enjoys the "stirring up of their minds" to the importance of the industry.

**Meadville, Pa.**—The committee appointed at the last convention of the Eastern Ohio, Western Pennsylvania and Western New York Bee-Keepers' Association, which met at Andover, Ohio, last January, met and arranged to have the ninth annual convention held in Meadville, Pa., on the 25th and 26th of this month.

**The Krainer Bees.**—The "Bienen Zeitung" contains an article from Herr Michael Ambrozic, of Moistrana, Krain, Austria, on the Krainer bees. The writer is a very enthusiastic admirer of that variety, and gives some information concerning it in its native home. From his article we give the following extract:

The profits of the apary in Germany and Austria, are estimated to be 45 per cent. on the capital invested. But bee-culture depends largely upon the hardness of the race of bees, and their propensity to gather honey. Krainer bees, in these respects, must be preferred. The rough climate of our mountainous country has made our bees a hardy race, for they have been hemmed in by mountains for centuries. Our bees fly in dark and cool weather, and suffer very little from diarrhea and other spring maladies. The rich mountain meadows and forests of Krain, with their profusion of bloom, animate our bees in the spring, and we often find them flourishing in March and April, breeding early, and beginning early to swarm.

My apary is situated but 1½ miles from the mountain Triglav, which is 9,000 feet above the level of the sea, and its north side is covered with eternal fields of ice, but for all that my hardy Krainer bees visit the herbs on the rocks in March and April, showing that they will succeed in any country, for they are used to rapid changes of temperature, and I can recommend them for importation to any country. Our bees are preverbially kind and gentle.

A correspondent who received a colony direct from Herr M. Ambrozic, says that "these bees are great beauties, being nearly black, with white stripes—the white being probably due to hairs, as they all seem to be young bees." About the hive in which they came from Krain, he says:

The hive to me is a curiosity, being made of tough, hard, rough boards, about 24 inches long inside, 14 inches wide, and 5 inches deep; top and bottom nailed with odd-looking hand-made nails, wooden pegs and wire nails; no frames inside; combs had been built diagonally, and were filled with dark-colored, thick, rich honey, about 20 pounds. It was quite a task to open this hive, but I did it, and found the Krainers lively, good natured, and so fond of honey that they all soon had their fill.

Their flight seems to be very strong, and I am inclined to think them large as compared with the Italians. It seemed odd enough to see these mountain bees flying very freely, with the mercury at 45°, when not a wing was to be seen about my other hives.

**Concerning Books** for bee-keepers, the "Southern Farm" remarks as follows about two books published at this office:

"Bees and Honey," by Thos. G. Newman, well-nigh embraces every particular about bee-keeping, which, if followed out, cannot fail to lead to great success in the apary.

"A Year Among the Bees," by Dr. C. C. Miller, is one of those pleasant books that often go further to help to attain to success than a more complete manual. This work is replete with information regarding the necessary implements, plans, etc., of a complete apary, and gives the results of 25 years' experience in bee-keeping.

**Look Over** last year's numbers of the BEE JOURNAL, and if any are missing, send for them at once, as we have but few left now, and they are daily becoming less.

## GLEAMS OF NEWS.

THOMAS W. COWAN, ESQ.

Dr. A. B. Mason, President of the North American Bee-Keepers' Society, wrote us as follows on Jan. 3, 1888: "Yesterday I received the following from Mr. Thos. W. Cowan. Please insert in the AMERICAN BEE JOURNAL."

8 Avenue de la Gare, Lausanne,  
Switzerland, Dec. 17, 1887.

DEAR SIR:—I see by the AMERICAN BEE JOURNAL that your Association has elected me an honorary member; therefore, I should be glad if you, as President, would convey from me the message that "I am extremely obliged for the honor conferred upon me by the North American Bee-Keepers' Society, in electing me, by an unanimous vote, an honorary member of the Society. I shall henceforth as a member take even a more lively interest in the welfare and progress of the Society than formerly, and more particularly as I have become personally acquainted with some of its leading members."... I read with much interest the proceedings at your convention, and regretted not being able to be present.

Yours truly, THOS. W. COWAN.  
To Dr. A. B. Mason.

President Mason has sent us the following responsive letter for publication:

I am sure we all feel that in honoring Mr. Cowan by electing him as an honorary member of our Society, we honored ourselves, and were glad of so good an opportunity to show him, in a feeble measure, the high esteem in which he is held by the bee-keepers of America.

We should have been glad to have had Mr. Cowan with us at the annual convention at Chicago, so that we could have had the opportunity, in a more demonstrative way, to have shown him what a cordial greeting we could have given him. It would have been a rare treat to have had him, in his pleasant and inimitable way describe to us the wonderful things his powerful microscope would have shown us. The brief, but enjoyable visit I had with him, is set down as one of the bright spots in my life; and the very fine photograph of himself that was enclosed in his letter, will be a constant reminder of the visit to our land, of one of England's best and noblest men.

A. B. MASON,  
Pres. N. A. B. K. Society.

P. S.—As the AMERICAN BEE JOURNAL and the "Canadian Bee Journal" are the only weekly bee-journals published, I send the above to them only, requesting other apicultural papers to copy same.—A. B. M.

**From the handsome girl's head,** lithographed in colors, nicely cut out, to the last slip of the pad, Hood's Household Calendar for 1888, is thoroughly artistic. Every month is beautifully engraved, and each slip as torn off presents a new and pleasing combination of color printing. Hood's Calendar easily leads the procession. It is nice enough for any parlor, and has so many excellent points in arrangement and convenience that it must be seen to be appreciated. Copies may be obtained at the drug stores, or by sending six cents in stamps to C. I. Hood & Co., Lowell, Mass.

**Putting Bees into Cellars.**

It has become quite common to give bees a flight during some warm spell in winter. To take them from the cellar and return them requires care, and some may inadvertently cause much damage by not knowing just how to do it. The "Canadian Bee Journal" gives these excellent suggestions about carrying the hives:

If the hives are carried in one at a time in your arms, the end of the frames should stand lengthwise from you, because if the frames stand sidewise, the sudden jar of moving causes them to oscillate, disturbing the bees, frequently breaking the clusters, causing them to gorge themselves with stores, and rendering the possibility of wintering more difficult, because of the fact that as it is usually warmer in the bee-house than out-doors at the time of carrying them in, they will not cluster again so tightly in the bee-house or cellar. If placed into winter quarters without being disturbed, they, of course, remain clustered in just that much more compact a form, and will not consume nearly so much food.

The same paper also gives these directions about how to prepare the hives for handling when first taking them in or when returning them to the cellar or bee-house:

Before we start to carry them in we close all the entrances, then if they should receive a slight jar that would otherwise disturb them, seeing no light they are not nearly as liable to become excited. The entrance-blocks are left on the hives in the bee-house until all are in. After making all dark inside, the entrance-blocks are removed, leaving the entrance full width.

**Fire.**—We are sorry to learn that Mr. S. H. Rickard, of West Bridgewater, Pa., has suffered a loss by fire. A local paper makes the following remarks concerning the misfortune:

Some time between 3 and 4 o'clock the residents of Bridgewater were awakened by the cry of fire, which was followed shortly after by the ringing of the foundry bell and the blowing of the Hob-Nail Works' whistle.

The residence of Mr. S. H. Rickard, on Water street, was burning, and the flames had already gained such headway that there was no thought of extinguishing it. The time in which to save the household goods was quite limited, and only a few of them were carried from the burning building, and many of these only in pieces, rendering them useless. In half an hour after the first alarm was heard, the house was a heap of smouldering ruins.

Fire caught in the kitchen, and is supposed to have been caused by the increase in the pressure of gas in the Heat and Light Company's main, from which gas was obtained.

The family was awakened by the noise made by the fire, and had barely time to escape. A domestic in the employ of the family ran in her night clothes to the stable, where she was compelled to remain until clothes were brought to her. Most of the clothing belonging to the members of the family was destroyed. The building and contents, together with the out-buildings, was insured in the Sun Fire Insurance Company, of London, England, for \$900. It was valued by Mr. Rickard at at least \$1,500.

In a letter Mr. Rickard recounts the loss in this language:

Besides the house and furniture, I lost several good colonies of bees, which took fire in the yard from the intense heat; and

many more of them would have been consumed but I moved them out into the street, and into the adjoining lot. My barn was saved only by the prompt attention of a good colored man, who got in the "mow" and kept the hay well-soaked with water. Although the barn was on fire for several minutes, and burnt nearly all weather-boarding off of that side, it was saved. Should it have burned I should have lost 18 colonies of bees that I have in the upper story of the barn, but luckily they were saved. I have lost all of my bee-fixtures and extra hives, and shall have to begin anew.

**Moving Bees in Winter.**—Mrs. L. Harrison, in the "Prairie Farmer" for last week, makes these remarks on the above subject:

As a rule it is not best to disturb bees during cold weather. It arouses them to activity, and some of them get away from the cluster, become chilled and perish. The combs are brittle and break loose easily when it is cold.

Before I became a bee-keeper I thought that bees could not be moved in any other way than on runners, and have learned no better way since, if they must be moved during cold weather. Place hay or straw in the bottom of the sled, and take every precaution against a jar. Two very careful persons working together, might lift them so easily they would never know it. Places should be fixed to stand the hives upon, and they should be removed from the sled at once. If they are left in the sled over night, and the next day prove warm, they might fly out and get mixed up, and then be materially damaged.

In moving bees at any time of the year, it is well to put something in front of the hive to obstruct their flight—to bump their heads, as it were. This causes them to stop and consider where they are, and take the points of the compass.

I once moved bees late in autumn, from one part of the apiary to another, and the first time they flew, which was six weeks afterwards, they went back to their old stand. The next day I gathered up handfuls of them clustered where the entrance of their hive had formerly been.

**New Catalogues for 1888** are on our desk, from the following persons:

Christian Weckesser, Marshallville, O.—20 pages—Queen-Bees, Garden Seeds, etc.

A. I. Root, Medina, O.—40 pages—Apian and other implements.

M. H. Hunt, Bell Branch, Mich.—12 pages—Bee-Keepers' Supplies.

Jacob Alpaugh, St. Thomas, Ont., sends sample section and comb foundation.

**Snow** around the hives is no detriment. It is porous, and enough air can penetrate it for ventilation in winter. When it forms ice at the entrance, then it must be cleaned away. An examination during and after a thaw is very necessary.

**The Convention.**—The pamphlet containing the report of the proceedings of the Union Convention in Chicago, is now published, and can be obtained at this office for 25 cents. Or bound up with the history of the International Society, and a full report of the Detroit and Indianapolis conventions, for 50 cents, postpaid.



## BIOGRAPHICAL.

### Mr. T. F. BINGHAM, APIARIST AND INVENTOR.

Many desire to know something more concerning the principal apiarists and inventors of the world, than can be obtained in the current literature concerning the development of the industry. In most cases this can be obtained more correctly, and in better form from the persons themselves than from any others. In the case of our present sketch, we concluded that this was particularly the case, and so, at our request, Mr. Bingham has furnished the following concerning his life and inventions:

My father's as also my mother's ancestors emigrated from England early in Colonial history. My mother's name was Kent; her ancestors settled in Connecticut, while my father's settled in Massachusetts. My grandfather moved from Massachusetts to New Hampshire, where my father was born. My father, when a young man, moved to Vermont, where he married and became a farmer. My grandfather Kent was a farmer, and also kept bees, and made very handsome straw-hives—the time-honored kind now shown in print, to denote "industry." He gave my father a colony of bees in such a hive. Those bees and their progeny my father kept during the remainder of his life—about 50 years.

The subject of this sketch was born Jan. 22, 1830, in Woodstock, Vt., and early became accustomed to and familiar with the management of bees, and also the current bee-literature of the times. When 18 years of age I was invited by a watch-maker to learn the watch and jewelry business. Three years were so spent, and then being desirous of further perfecting my business, I accepted a position in a Boston house; after which I was employed as a watch-maker in New York, Petersburg, Va., Columbus, Ga., and Cincinnati, O. I then commenced the jewelry and watch business for myself in Gowanda, N. Y.

Thinking that some out-door employment might prove a recreation and a reward also, I bought 25 colonies of bees and transferred them to Langstroth hives. Soon after that I purchased 75 more in logs, barrels and boxes, which were also transferred at once to Langstroth hives, to work for comb honey, which then (three years after the American war began) was worth 40 cents per pound by the ton or car load, gross weight, without crating, in the bee-yard.

#### Invention of a Bee-Hive.

A few winters and summers led to the belief that bee-keepers had not yet all that was needed for the easy and successful production of comb honey, and the safe wintering of the bees.

Experiments had shown that a flat hive, having 4 inches of comb, and a large upper surface for supers realized much better results, but it was regarded impracticable to try to winter bees in such hives with or without protection.

I then decided to make a frame of triangular form, each of the three sides measuring 23 inches, two of the sides having a piece 1½ inches wide attached to hold the frame upright, and to furnish a shoulder, against which the surplus boxes should rest. This arrangement gave ample space for eight 6-pound boxes, in close proximity to the brood; while, at the same time, only eight large frames were required for honey for winter and other use. These frames were clamped together by a wire loop across the

wide ends of the frames, and the movable sides—the whole making a hive as compact as any box-hive, yet easy to manipulate under all circumstances. Either movable side had a long entrance (23 inches) and a portico. Around the whole was a bottomless box having a loose cover. This served as a cover to the surplus in season, and to hold chaff in winter. This hive was a radical affair, and attracted considerable comment among bee-keepers.

Many hives were brought out in different places embodying the same principles, but of different form. Among these may be mentioned the "Quinby improved," which had a series of large, rectangular, tight-end frames, clamped together and setting in a loose box, which served as a cover to the surplus in season, and to hold packing for winter.

The triangular frame, however, was soon abandoned, and at once remodeled, so as to use the same outside cover and front and rear sides. This was done by nailing the tight-ends to a strong top-bar 22½ inches long, forming a rectangular frame holding a piece of comb 5x22½ inches.

The above changes converted a hive made before the extractor became much used,



T. F. BINGHAM.

(having frames impractical for extracting purposes), into a hive peculiarly adapted to tiering-up—the extractor just then coming forward as an implement or machine of value to apiculture.

In conventions in Michigan and elsewhere this hive was much discussed, but was regarded as too flat for practical use. It has, however, held exclusive possession of my apiary for a period of 20 years, without a wish to change it. It embodies the principle in a high degree on which my first experiments were made; viz: large upper surface for surplus comb honey in close proximity to the brood.

#### Invention of a Smoker.

While the hive experiments were progressing, I was also trying various devices for the production and easy management of smoke, which experience had shown to be absolutely necessary to the easy and rapid handling of bees in movable-combs or otherwise.

My first experiments were the production of a light tin tube having a fire grate and two cork ends, in each of which was a small wooden-tube, to be held in the mouth and to direct the smoke. This proved to be very handy, as both hands remained free for use. They were used quite extensively. They were not, however, all that I desired, and continued experiments were persever-

ingly made. These experiments led to a comparatively handy smoker held in the hand, but operated by the mouth, through a small, flexible tube, one end of which was held in the mouth while the other furnished the smoke tube with air and blast. This was a great advance on any other mouth smoker, but the same old weakness clung to it, that had clung to the others—if you stopped blowing, the fire died out.

But this smoker demonstrated many fine points, as well as its own weaknesses—the latter of which proved the most valuable. They led to the establishment of the natural draft between the blast-pipe and the smoker-stove, continuous, unobstructed, reliable and direct. The principle was now a fixed and established reality—needing only a few ingenious experiments to render it what it has proven itself to be, viz: one of the greatest aids to easy practical apiculture in every country where enlightened methods prevail.

Had Father Langstroth possessed such an implement for managing bees, while his patent was in his own hands, it is safe to say that his hive and system of management would have been more easily introduced to bee-keepers, and that intelligent apiculture would have been very greatly promoted.

#### Invention of an Uncapping-Knife.

It has been said that "necessity is the mother of invention." The necessity of uncapping combs to extract the honey with unscientific uncapping knives, cheaply made of poor material, led to experiments which developed the peerless Uncapping Knife, now known as the Bingham & Hetherington Uncapping Knife, wherever the honey extractor is known.

Our family and the Hetherington family, if these inventions are of value to the bee-keepers and the world, have not lived entirely in vain. It has been claimed that bee-keeping to be a success must be the special pursuit. In answer, it will be borne in mind that in the Kent-Bingham family bees have been kept consecutively for at least one hundred years. Also that in no one case have they been other than a side issue or pursuit. If, then, the introduction of shallow, tight-end frames, the invention of the direct draft bee-smoker, and the single beveled uncapping-knife may be reasonably called successes, bee-keeping simply as a side-issue in our family, at least, may be regarded as a success.

Briefly yours, T. F. BINGHAM.  
Abronla, Michigan.

#### Long Preservation.

A Case of remarkable preservation of apples comes to us from Pokeepsie, N. Y. The "Evening Enterprise" remarks thus concerning it:

We received to-day from the hands of Mr. George H. Knickerbocker, who keeps a bee-farm in the town of Pine Plains, specimens of two varieties of apples—"russet" and "lady sweet"—that were grown on his farm in 1886. They are in an excellent state of preservation, and look as if they might be kept for an indefinite period of time. Mr. K. informed us that they were kept in a fruit cellar without any artificial means applied to preserve the fruit, and he attributes their remarkable preservation to the even temperature of his fruit cellar. It is certainly a remarkable showing, and is worthy the attention of all who are interested in the preservation of fruit in its natural state.

Mr. Knickerbocker is one of our advertisers, a progressive apiarist, and queen-rearer of prominence in New York.

## QUERIES AND REPLIES.

### THE ENTRANCES TO HIVES, AND VENTILATION.

*Written for the American Bee Journal*

**Query 503.**—1. What kind of hive entrance do you prefer—the dimensions, how contracted, etc.? 2. Does this entrance furnish all the ventilation necessary?—Goshen, N. Y.

1. I use an entrance  $\frac{3}{4} \times 14$  inches, contracted by entrance-blocks. 2. Yes.—G. M. DOOLITTLE.

1. The full width of the hive and  $\frac{3}{4}$  of an inch deep. 2. Yes.—C. H. DIBBERN.

1. The one usually made in the Langstroth hive— $\frac{1}{2}$  inch deep and the whole width of the hive, contracted by two 3-cornered entrance-blocks. 2. Yes, usually.—EUGENE SECOR.

1. Eight inches long, and  $\frac{1}{2}$  inch high. Contract by the use of blocks similar to the entrance-blocks of the Langstroth hive. Contracting the entrance is seldom necessary. I leave them wide open in winter. 2. Yes.—M. MAHIN.

1. The full width of the front end of the hive, and  $\frac{3}{4}$  of an inch high; contract it with entrance-blocks. 2. Usually it does, but not always.—A. B. MASON.

1. On the whole, I prefer it  $\frac{1}{2}$ -inch by 8 or 10 inches, and contract the size by the Langstroth triangular blocks.—A. J. COOK.

1. One-half inch high and the full width of the hive, to be contracted as needed by a block or stick. 2. Yes.—C. C. MILLER.

The full width of the hive and  $\frac{3}{4}$  of an inch wide. Contract it with right-angled blocks in the early spring. In the summer and winter have the full entrance open, and furnish necessary ventilation.—MRS. L. HARRISON.

One-half inch wide and the whole width of the front of the hive; contractions to be made with the Langstroth entrance-blocks. Such an entrance furnishes as much ventilation as is needed, so far as I know.—W. Z. HUTCHINSON.

Ten inches wide and 5-16 of an inch deep. Besides in the summer we raise the hive from the bottom and give as much as 2 inches room in depth, in front. We leave the back closed.—DADANT & SON.

1. I prefer the entrance 10 or 12 inches long,  $\frac{1}{2}$ -inch wide, which I contract as occasion requires, either by slides or by triangular blocks. 2. It will, if the hive is properly shaded.—J. P. H. BROWN.

1. I prefer an entrance  $\frac{1}{2}$ -inch by 11 inches, and to have it come beneath rather than at the ends of the brood-frames, as usually provided. This kind of an entrance is quite effectual against robber bees, and with full colonies it needs no contraction at any time of the year. 2. On very hot days I give further ventilation at the top of the hive.—G. L. TINKER.

1. I use the Langstroth hive  $14\frac{1}{2}$  inches wide, and give an entrance the whole width of same. 2. Yes, ordinarily, if shade of some kind is used to guard against the sun.—J. E. POND.

The whole width of the hive, and  $\frac{3}{4}$  of an inch deep, contracted by the entrance-blocks. 2. It will until it gets very warm, then I raise the hive up on little blocks  $\frac{1}{2}$  inch by 1 inch, placed under each corner. That will raise the hive  $\frac{1}{2}$ -inch from the bottom-board all around, except in front, which will be  $\frac{1}{4}$  of an inch.—H. D. CUTTING.

1. I use and prefer the entrance to the hive to be on a level with the bottom-board of the hive. I prefer this style of entrance for too many reasons to be mentioned here. A slight pitch to the front will drain the bottom-board of all moisture. I make the entrance  $\frac{3}{4}$  of an inch high, and full width of the hive. I contract it by means of two blocks that can be moved at will. I have had no trouble with this arrangement in any way. 2. The ventilation is ample except in excessively hot weather, at which time the hive-covers can be raised slightly, to the comfort of the bees.—G. W. DEMAREE.

I use, and prefer, an opening of from  $\frac{1}{2}$  to  $\frac{3}{4}$  of an inch, and clear across the end of my hive, which is  $11\frac{1}{2}$  inches. I prefer the triangular Langstroth blocks to the many devices that I have tested, and all I have ever heard of. These entrances, with the aid of the bees, furnish all the ventilation needed; all upward ventilation in summer has proven worse than useless with me.—JAMES HEDDON.

I prefer an entrance made by cutting a piece  $\frac{3}{4}$  of an inch deep out of the front end of the bottom-board, extending clear across the front end, and running to a point something like a V about 4 inches from the front end. Give a full entrance by pushing the hive even with the front end, which gives all necessary ventilation. The entrance is reduced by sliding the hive back.—R. L. TAYLOR.

1. The entrance should be the full width of the hive, and about  $\frac{3}{4}$  of an inch deep. The triangular blocks of the Langstroth hive are about as good as we could wish. 2. The ventilation secured at the entrance of the hive is usually sufficient.—THE EDITOR.

### EMPTY COMBS, OR WIRED FRAMES OF FOUNDATION?

*Written for the American Bee Journal*

**Query 504.**—If bees are all ready to begin work in the supers, which would be preferable, empty combs at \$12 per 100, or wired frames of foundation costing about \$9 per 100?—Sturgis, Mich.

Empty combs, every time, if you are producing extracted honey.—JAMES HEDDON.

Give me the wired frames at the figures named, every time.—C. H. DIBBERN.

I think that I should prefer the wired frames.—MRS. L. HARRISON.

If to be used for obtaining extracted honey, I think that the combs, if good ones, are preferable.—R. L. TAYLOR.

The wired frames of foundation, if you wish to get the surplus in the supers.—A. B. MASON.

At a rough guess I should not have much choice.—C. C. MILLER.

I would prefer the empty combs, if in good condition.—H. D. CUTTING.

If the combs are new, perfectly clean and straight, take them; but if they are old and dirty looking, take the foundation in preference.—J. P. H. BROWN.

If the honey is to come in "showers," the combs would be preferable; if otherwise, the foundation.—W. Z. HUTCHINSON.

I should prefer the empty combs, if they are clean and bright, and not filled with pollen.—J. E. POND.

I do not quite understand the question. If the combs and frames mentioned are for the brood-nest, I would take the empty combs.—M. MAHIN.

The empty combs, provided they are worker combs. We suppose you speak of producing extracted honey.—CHAS. DADANT & SON.

At the present prices of extracted honey, and given a prospective heavy flow from basswood, I should take the empty combs.—G. L. TINKER.

If by "super" you mean upper story for extracting, I would prefer the empty combs. If working for comb honey in sections, the foundation would be worth the most below. I fear that I do not fully understand the intent of the query.—EUGENE SECOR.

I should prefer the empty combs, if I understand the question rightly; but I would prefer to have the bees build them at times when it could be done at a less expense.—G. M. DOOLITTLE.

The question is not clear. If they are "all ready," they must have a set



of filled combs in the brood-chamber.  
—A. J. COOK.

If the combs were good ones in every way, I would accept the combs without hesitation. It takes time for bees to draw out foundation, and they will not do it unless honey is coming in. I am quite sure that the empty combs would give a good profit over the frames of foundation, after accounting for the difference in the price. I would not have wire in my combs as long as I can get a good article of foundation suitable for combs without wire. I have a lot of wired combs, and they will never be increased in numbers in my apiary.—G. W. DEMAREE.

That depends upon the condition of the empty combs. If they are in good condition, they would perhaps be preferable, but there is but little difference.  
—THE EDITOR.

### SWARMS ALIGHTING HIGH.

*Written for the American Bee Journal*

**Query 505.**—Are not swarms that alight high, more likely to desert the premises?—E.

No.—MRS. L. HARRISON.

I do not know.—H. D. CUTTING.

I do not know.—W. Z. HUTCHINSON.

No.—DADANT & SON.

They usually are.—J. P. H. BROWN.

Not if the same care is exercised in hiving.—A. B. MASON.

No; it makes no difference where they alight.—C. H. DIBBERN.

I do not know why they should.—C. C. MILLER.

Yes, but only so far as I know for the reason that there is generally greater delay in recovering them.—R. L. TAYLOR.

Yes, if you cannot reach them. In fact, without joking, I believe there are more individual bees that desire to go right off to the woods in swarms that cluster high up.—JAMES HEDDON.

I think so, for the reason that they are more likely to have a young queen, and young queens are more likely to leave than old ones.—EUGENE SECOR.

I have not seen any difference, and I cannot imagine any reason why they should.—J. E. POND.

I have seen no difference. In fact I have never had a swarm to come out after I had hived it.—M. MAHIN.

Not in my experience. Bees are more apt to emigrate when located in the country near heavy timber. In villages and cities it is rare for a swarm to go away unless uncared for.

My bees often go to the tops of the highest apple-trees, but I have never had a swarm to go away, or desert a hive if properly shaded and ventilated.  
—G. L. TINKER.

No swarms desert for me, as I keep the wings of the old queens clipped, and allow few if any second swarms. I think that the alighting has little to do with it.—G. M. DOOLITTLE.

I should say so, as the bee-keeper finds it difficult to capture them, and certainly will be more tardy in hiving such a swarm. Clip the queen's wing, and there will be no danger, in any event.—A. J. COOK.

I think not. I have seen swarms cluster so high that no ordinary means could reach them, and they would tarry as long in the cluster as other swarms that clustered near the ground. I am not a believer in the marvelous stories about bees "sending out scouts to look up a new home." People are fond of the marvelous, and are ready to believe anything, if it is a little out of the general order of things. I venture to assert that bees never know where they will stop when they leave the maternal roof. I have seen a swarm go straight to a tree and enter a hole in it; but that does not prove any thing, for I have seen them fail to do so, a great many more times than I have seen them do it.—G. W. DEMAREE.

Swarms that alight high usually, have young queens, and as it is more difficult to capture such swarms, and takes more time to accomplish it, they do more often get away than those which are more easily captured. If the queen's wing be clipped, as practiced by many of our best apiarists, there will be no danger of their going away.—THE EDITOR.

### O Winter, We Greet Thee.

*Written for Vick's Magazine*

BY S. W. LLOYD.

We greet thee, Winter! We are glad  
To see thy snowy mantle spread  
O'er river, lake and hill;  
We're glad to hear the merry sounds  
That tell us happiness abounds  
Among sleigh-riders still.

We love thee, Winter! Thou dost bring  
Upon the cold and frosty wing  
Much, much our hearts to glad;  
And though thou'rt bleak, we'll not repine,  
For springs of joyousness are thine  
That Summer never had.

Then, hail thee, Winter! We will greet  
Thy pleasures with a welcome meet,  
And taste them while they stay;  
And when thou'rt gone, and joyous Spring  
Comes with her robes of blossoming,  
We'll bid thee speed away.

## CORRESPONDENCE.

### FOUNDATION.

#### The Plan of Manufacturing it with the Use of Molds.

*Written for the American Bee Journal*

BY G. M. DOOLITTLE.

I was a little surprised to find that every one answering Query 500, on page 788 of the BEE JOURNAL of 1887, answered it in the negative, except myself. Can it be that few, if any, of our apiarists are using molds for making foundation? And if such is the case, why are they not using them? As my answer to the query above mentioned has caused quite an increase in my correspondence, I will try to answer some of the questions that have been asked.

I never was favorably impressed with any of the machines requiring dipping-boards, in the hands of the average bee-keeper, owing to its taking so much paraphernalia, and especially as so much wax was required; for when I sent wax off to be worked up, I was told that if I sent less than 50 pounds, I would get little, if any, of my own wax in the foundation that I would receive, as it took from 50 to 75 lbs. of wax in the dipping-tank to get the required depth of sheet. As soon as I understood this, I saw that it was of no use for me to think of making my own foundation, to carry on the few experiments which I wished to make. Therefore I then rested contentedly in purchasing the little foundation that I wished for experimental purposes, till about five or six years ago, when I saw an advertisement regarding "foundation-molds" for making small sheets of foundation for sections.

From the little information that I gained from the advertisement, I saw that I could use as small a quantity of wax as I wished in working the molds. I immediately procured the molds, and was soon making foundation running from 10 to 12 square feet to the pound, by simply pouring a large spoonful of melted wax into the molds, and quickly shutting them. With these little molds (about 6 inches square) I could easily make up 12 pounds of wax in a short winter's day, which gave me \$3 for my day's labor, as I must pay 50 cents per pound for foundation when wax was only worth 25 cents per pound.

After making all the wax I had into nice foundation, I lent the molds to a neighbor bee-keeper who left them at night while wet, when the plaster of Paris was frozen, thus ruining them, as

they all crumbled off in using afterward.

The next year I secured another mold 12x12 inches square, on which I can easily make from 40 to 50 pounds of wax into foundation in one day; and as these have been kept from frost, except when dry, they are now as good as ever, after having made considerable foundation on them for myself and neighbors.

#### How to Use Foundation Molds.

All that is necessary to do in making the foundation is, to have the extractor can filled with water, which is kept cold by ice, or allowing a stream of cold spring-water to run through it, on top of which (can) a rack is fixed similar to the one which goes over the Dadant uncapping can, upon which the molds rest. Having the can thus fixed, plunge the molds in the water an hour before you wish to commence work.

Now place a large pan filled with wax on the stove, having the can near by, or, what is preferable, if you have one, place an oil-stove beside the can, having a melting dish fixed for the purpose on the oil-stove. This dish should have an apron made of tin to extend from it to the can, so that all drippings will run either back into the melter, or over into the can, the former being preferred.

Being thus ready, raise the molds from the water, let them drain a second, and then place in position in the frame over the can, when with a small dipper, or the fount that comes with the molds, pour the required amount of melted wax on the lower plate of the mold. As soon as the wax is on, shut the mold with a steady hand, giving it as much of a pressure as is convenient by bearing down with the hand. In a few seconds open the molds, and remove the sheet of foundation, when you are ready to pour on melted wax again.

After about 5 or 6 sheets of foundation have been made, the molds will begin to get warm, when, if heavy foundation is to be made, they must be opened and put in the water again to cool off, leaving them in the water for about a minute. If thin foundation is desired, dip the molds in the water only enough to keep them so cool that they will not tear the foundation to pieces in opening them. I make the heavy foundation to run about 6 square feet to the pound, and the thin from 11 to 12 square feet; and I can make good wages doing it, if only 20 colonies were kept, and those to be furnished with nothing but starters; for I have my own wax, extractor can, dipper, stove, etc.

Now if Mr. Dadant or Mr. Van Deusen should see a sheet of this

foundation, they would doubtless say, "Doolittle, this does not compare with the foundation that we make;" when I would say, "By what authority do you decide?" expecting to be met with, "See, it does not look nearly so perfect as does ours." Then I should say, "Admitted;" but when the authority is the bees, they say: "Give us the molded foundation, and we will work it out just a little quicker than the other, and after it is completed you nor any other man can tell any difference."

From my experience with this and nearly all other kinds of comb foundation, I am convinced that this molded foundation is equally as good as any; is accepted by the bees just as soon as that made on the Given press, and a little sooner than that made on any of the roller mills; and the best of all is, that any one can make it at his leisure, use up his own wax, even down to the last ounce, thus being independent, and keeping his pennies at home to feed and clothe his family.

To anticipate an error regarding this article, I will say that I am in no way interested in the manufacture, or the sale, of the molds, any more than I am in all other bee-keeping appliances. I have written this article only for two reasons, viz: First, to tell my friends regarding what I believe is a good thing; and, second, to answer my numerous correspondents publicly, so as to avoid the strain on my time and health that a private answer to each would cause.

Borodino, © N. Y.

### COUSINS TALK.

#### Putting Bee-Literature on its Proper Basis.

Written for the American Bee Journal

BY R. M'KNIGHT.

So, after all, Dr. Mason "has no unkindly feeling toward his cousins across the border." Well, I began to suspect as much, from his own utterances, as well as from the good character that has been given him by others who know him. When he administers the lash, it is for the sole object of correction, and not for the purpose of inflicting pain. He tells us so himself, and who has a better right to know? His dearest wish is to exercise a fatherly care over the erring. "All wayward people who go astray," are the especial objects of his care; and "to aid in getting them in the right way when they go astray," he feels to be a duty to which he has been called.

In pursuance of this self-imposed task, he tells us that he is not going to "confine himself" "to any one erroneous statement," but thinks he shall

"wander around after such bee-literature as gets off its base." I admire the Doctor's courage, for none but a courageous man would undertake such a Herculean task, and none but a hopeful one could expect to succeed in the undertaking. It would be a cruel thing to say or to do anything calculated to make rough the path of duty which the Doctor has mapped out for himself, however much we may doubt his ability to reach the goal of his ambition.

After this he may tell us as often as he may please, that we are a people given to "bombast;" we will remember that it is just a way he has of putting bee-literature on its proper basis. He may charge us with practicing "dishonesty and fraud," but we will know that these charges are only the hammer and the trowel that he employs in making the "crooked" things straight. He may say that we steal the name of your linden honey, but he does not mean it, for he "has no objection to Canadians giving their products any name that they choose."

The Doctor says that he does not *hate* anybody. I sincerely believe that to be a fact, and regret having used the word in a way that he might think it was meant to have a personal application to himself. I am upon my knees in penitence, that I misunderstood his motives. I shall hereafter only think of him as one of America's greatest philanthropists. "A gude New Year to you," Doctor, "and many happy returns."

Owen Sound, Ont., Dec. 30, 1887.

### UNFINISHED SECTIONS.

#### How Best to Utilize the Partly-Filled Sections.

Written for the American Bee Journal

BY C. THEILMANN.

In the report of the proceedings of the North American Bee-Keepers' Convention at Chicago, I find the discussion on the re-use of comb built in sections to be filled with honey the next season. It is gratifying to know that the great majority of bee-keepers consider these combs of great advantage, by which they can obtain larger crops of honey, and of just as good quality, as by the use of foundation. I can hardly understand why some bee-keepers cannot obtain good honey in nice, white combs built in sections the year previous.

Some years ago it was a real perplexity to me, to have a lot of unfinished sections in different states of completion, after the harvest was over, and I hardly knew what to do with them. I then tried in different ways to make use of them. Those nearly



## BEE CELLAR.

## The Proper Temperature and Ventilation of a Bee-Cellar.

Written for the American Bee Journal  
BY A. C. TYRREL.

completed I sold at about half the price of sealed honey, and the rest was given to the bees for completion the next season, and of which the bees made a bad job, as some of it was granulated, and some was sour, though they fixed it all up as well as they could, and finished them; but it was horrible looking honey, the sides of the comb was very uneven, besides being of different colors. I was almost ashamed to offer it for sale.

## Using Partly-Filled Sections.

After experimenting two or three seasons more, I discovered the right way, though I think I had lost considerable before, by trying to make the bees finish nearly all the sections the same season, by changing them around among the hives. This was not only lost time for me, but also for the bees, or rather, less honey for me. I now allow my bees to go above toward the close of the honey season, and let them have their own way about finishing the sections; but as soon as the honey season is over, I extract every unfinished section that I have, and let the bees clean them out, when they are ready for the next season. By this method I secured just as fine honey as I do with foundation starters, and a great deal more of it; and the cases with the empty combs are nicely put away, where no mice or dust can get at them.

I am glad that there are more bee-keepers who can secure nice honey with these combs, as was shown at the late convention in Chicago; that Mr. Hutchinson had the nicest lot of honey in Chicago; and that he, as we understand, uses the empty combs.

When I was ready to sell my honey, I have never been asked, "Are your crates and sections clean?" or, "Are the combs from last year?" etc. No, not any of these questions have ever been asked, but invariably, "Is your honey white?" and on this *white* the whole question turns, in selling and buying.

If I have my dark honey in ever so nice combs, crates and sections, it is slow sale, and at a far lower price than white honey; even if the latter is less attractively put up. Of course it is best to have the honey in the best marketable shape, and everything else clean, and in its proper place.

## Report for 1887.

I commenced with 145 colonies, increasing them to 217, by natural swarming. I obtained 7,000 pounds of comb honey, and 1,000 pounds of extracted honey. The whole crop realized for me about \$1,300. I also sold bees enough to pay nearly all the expenses of the apiary.

Theilmanton, O. Minn.

So much has been written on this subject, that the heading of this article may prevent an impartial perusal thereof, by those who consider that they long ere this learned *all* there is to be known about wintering bees successfully in caves or cellars. But I opine that many decades will elapse ere the "A B C class" in apiculture graduate.

What I am about to advocate, I am well aware will not meet with a "second" from the majority of bee-keepers throughout the country, for my experiments (not assumptions or mere theories) will not comport with what they term "reason" or common sense, but *audi alteram partem* (hear the other side), and then condemn, or award the full measure of praise if the *proof* herein presented for consideration sustains my assertions.

In the matter of temperature and ventilation, I have endeavored to thoroughly post myself, for they are the most important factors—all others are of minor importance, as matters over which we have no control, such as honey-dew, improper food, etc., speculative fancies, formative hypothesis, to meet the exigency of exceptional cases. Whenever it has been my good fortune to make a discovery, seemingly outside of the usual order of things, it has been the practice with me to patiently watch and experiment for at least *three* seasons before acquainting the public with the result of my observations—so often do our fondest hopes and brightest dreams prove to be chimerical. And of those composing the great fraternity of bee-keepers, from the Orient to the Occident, having many a pet theory and hobby-horse to ride, when asked to give "a reason for the hope that is within them," at once "trot out" *Experience*, of longer or shorter duration, in accordance with the importance of the case, or amount of pressure brought to bear by adherents of the opposite side of the question.

For a long time I was of the opinion that my bee-cellar was *too warm*, but as so many of my fellow-apiarists said 41° to 45°, and some have said 52°, Fahr., I endeavored to so regulate the cellar that the temperature would not fall below 45°, but I signally failed to exclude frost; and it was well for me in a financial point of view, and certainly better for the bees, that I did fail.

During the winter of 1885, and the following winter, the thermometer in my cellar, after the cold weather set in (say about half of the winter), registered 30°, occasionally dropping down to 28°, but, strange (?) to say, the bees, without any exception, wintered perfectly.

Last winter the cellar was made much warmer than ever before, the mercury indicating 45° (often higher), but the loss of bees was *much greater* than the preceding winters. Was this phenomenal, or the legitimate result of cause and effect? On Nov. 22, 1887, my bees were put into the cellar, having previously provided tight outside and inner doors, and stopping all crevices, besides making ample provisions for ventilation. The weather has been, with one exception, unusually warm, and in consequence the thermometer in the cellar has registered, nearly every day, 50°, until night before last, when I succeeded (by opening wide all out-side doors, and raising the curtain used for darkening the apartment) in lowering the temperature to 42°, and last night to 32°.

Up to this time the stronger colonies have been very restless, necessitating the use of wire-cloth to confine them to their respective hives. Night and day it was distressing to hear them "roar," so different from the low, gentle hum of contentment that there is no mistaking the cause, or sound. Although there were no symptoms of diarrhea, the death-rate was fearful, and would soon have depleted the colonies had it not been checked.

When the mercury dropped to 42°, the change inside the hives was apparent at once, but when it reached 32° the bees went into the hives and remained perfectly quiet and contented.

Whenever the temperature rises above 42°, Fahr., in my cellar, the bees become restive, and boil out of the hives as if in the act of attacking marauders; hence I say that from 32° to 38° is the proper temperature for a bee-cellar or cave; and I do not fear for the safety of my bees if it drops occasionally to 28°.

If I could regulate the temperature at all times I would not allow it to rise above 40°, for I am satisfied that "heat" is more injurious to bees in "confinement" than cold, provided the cellar is dry and well ventilated.

How many, if any of the bee-keepers who have written on the subject, have tested the condition of a *strong* colony as to bodily heat generated? How do they know that 45° or 50° is "about right?" that if the temperature falls below those figures, the bees become restless, exercise violently to keep warm, consume more honey than is

necessary to sustain life, and diarrhea is the result? Do their assumptions comport with scientific investigations? That theory is fallacious, and has no foundation in fact, so far as my observation has extended; for we have occupied a room above the bee-cellar for four winters, and cannot subscribe to that hypothesis.

By repeated trials I have satisfied myself in regard to degrees of heat engendered by a large colony. For instance, when the temperature of the cellar 3 feet from the hive is 32°, inside (not among the cluster), a thermometer laid lengthwise on top of the brood-frames registers 78°, a difference of 46°, with the hive raised from the bottom-board a bee-space, and burlap on the hive slightly raised. If the same rule applied to a higher (outside) temperature, it would be as follows: At 35° on the outside, inside of the hive it would be 81°; 40° outside, 86° inside; 45° outside, 91° inside; 48° outside, 94° inside; and 52° outside, 98° inside the hive.

My bees on the summer stands, whenever the mercury reaches 90° in the shade, either loaf idly around the throne (bee-throne) or hang outside the hives, and I feel like following their example. If the degrees of heat was maintained in proportion to the scale above given, the heat inside the hives would be unendurable, but at 41° outside, the bees begin to break cluster, and at 45° the cluster is broken up, and they manifest a very restless disposition, traveling swiftly to and fro, trying to get out of the hives, and on such occasions the loudest "roaring" is heard. This fact cannot be gainsaid, for inside of the experimental hive the thermometer registered but 76°, proving conclusively to me, that the bees endeavor to keep the temperature at from 76° to 78°, the proper condition for successful wintering.

High temperature, in my opinion, is the cause of bee-diarrhea, not improper stores, as my weak colonies have never shown symptoms of that disease. Again, hives packed full of bees, as many of mine are, with the mercury ranging from 45° to 50°, sweat profusely, and the combs in consequence soon become moldy, the honey unfit for use, the entire colony perish, and in the spring, when the hives are opened, to our astonishment we find a putrid mess of bees, and the cause is attributed to pollen, honey-dew, or poor honey, jumping at conclusions. While it is a fact that our stronger colonies cannot be wintered successfully in a cellar wherein the temperature rises so high as to cause the trouble indicated, weak colonies will remain perfectly quiet, and winter well in an

atmosphere deteriorous to the majority of large colonies.

As all colonies are not of uniform size, we must make the conditions alike for both large and small ones, which can be done by dividing the larger, and contracting the smaller colonies, by using division-boards, thereby compelling them to cluster as desired. I prefer medium-sized colonies, but "men and mice go oft agley," men especially, if as in my case the elements combine to frustrate all our well-laid plans.

In this article I have been actuated by a desire to help solve the problem of wintering bees, "under the ground," and as an "ounce of preventive is worth a pound of cure," so is one practical scientific fact of more value than volumes of theoretical asseverations. I have been careful not to submit "positive assumptions upon the tottering platform of unverified theories."

Madison, ♀ Nebr., Dec. 16, 1887.

## SPECIALISTS.

**Can a Specialist produce Honey cheaper and in better shape than others? If so, why?**

Read at the Ontario Bee-Keepers' Convention,  
BY DR. C. C. MILLER.

By specialist, in this case, I suppose is meant one who keeps a number of colonies and makes bee-keeping at least a principal part of his business. Just where is the dividing line between one who is, and who is not a specialist may not be so easily determined. I suppose all would agree that a man who keeps a thousand colonies and devotes his whole time and thought to bee-keeping is a specialist, and one who owns a single colony which is left to take care of itself without the owner's knowing whether the king or the drones lay the eggs, is not a specialist. Somewhere between these two lies a ground where it might be hard to tell whether a man were a specialist or not. Without any hair-splitting, however, we may all agree that the specialist in bee-keeping devotes a considerable portion of his time and thought to the care of his bees, and has enough colonies so that their failure or success may be a matter of serious concern to him.

I may as well frankly avow myself as a believer in specialties, but it is well to look at both sides. The general tendency is toward specializing in all departments. Our great grandmothers cut the wool from the sheep's backs, and without passing from their hands the wool was fashioned into stockings or coats. Now all that is changed. At least half a dozen persons take the place

of the one great grandmother, each one pursuing his specialty, and so it is everywhere.

In an age so keen to the pursuit of wealth, there is no evading the conclusion that there must be money in settling down into specialists, or it would not be done. There are, however, exceptions to general rules. Take the two cases we have supposed, one man with a thousand colonies, another with one. The 1,000-colony man cannot produce honey for nothing, that is clear. He must have something to buy his bread. The 1-colony man attaches little or no value to his bees. They cost him nothing, and in the event of a failure of the honey crop, he counts upon no loss for he has bestowed no labor on his bees, no study or thought. If they give him a crop, it is so much clear gain. He divides with his neighbor, or takes his honey in a pail to the nearest store, and accepts whatever price is offered, as he is not particular what he gets for that which has cost him nothing. He counts it about the same as the wild grapes which grow in his fence-rows, and which any one can have for the gathering. Looking at it in this light, as between the man with 1,000 colonies and the man with one, does it not look as if the latter has the best of it in point of cheapness? Looking at it no further than this, I do not wonder that some hold the view that every one should be encouraged to keep bees, and that to have honey plenty and cheap, all that is necessary is to have a bee-hive at every man's door.

But let us see what is the result of this happy-go-lucky state of affairs. Has not this system been tried? I think that close observation will bear me out in saying that before the days of specialists in bee-keeping, when honey "cost nothing," not one family had honey to eat where three now have it. Please do not forget that the plan of having bees kept 1 or 10 colonies in a place, is exactly the system that was in vogue 50 years ago, and is no new thing. Is the system practiced as much now as then? Look around you and see. People are not apt to give up that which is profitable. If the man with one colony can produce honey for nothing, does he follow it up year after year? Very seldom. The fact is, take a series of years and he cannot produce his honey as cheaply as he can buy it of the specialist, and the strongest proof is his own actions.

I have just been looking over a list of bee-keepers of ten years ago, and of those who were specialists not one in ten has left the ranks. On the other hand I recall to mind those who were non-specialists living about me ten years ago, and not one in ten of them to-day owns a bee, although some of them had as many as 20 colonies. Put-



ting these two facts together, do they not show that the specialist can produce honey more cheaply than others? Else why does he keep at it, and others give it up. The fact is, the latter consider it a matter of luck. If, walking along the road, I find a silver dollar and pick it up, it costs me nothing, but I would hardly argue from that, that finding silver dollars in the road is the cheapest way of getting them as a steady business.

Very strong proof, then, that the specialist can produce honey more cheaply than others is the simple fact that he persists in the business when others give it up. Now why can he produce it more cheaply? Why can you buy your coats and pants at the clothier's more cheaply than your wife can make them? Because the clothier has the proper appliances, and knows his business. Just so with the specialist in any line. The man who makes a specialty of bee-keeping is provided with books and papers. He studies his business, and is thus less liable to make disastrous mistakes. Keeping a large number of colonies, he can afford to be supplied with the best implements and labor-saving appliances. Above and beyond everything else, however, is the one reason, that the specialist knows his business. Can you expect anything else in any line of business than that the man who gives his best thoughts and energies to that business will succeed better than he who knows nothing about it?

To take the middle part of the subject last, the specialist will produce honey in better shape, for the same reason that he can produce it more cheaply, simply because he has better facilities, and because he *knows how*.

Marengo, 8 Ills.

## SEASON OF 1887.

### Comparing Farmers with Apiculturists in a Poor Season.

Written for the American Bee Journal  
BY DR. H. J. SCOLES.

I commenced the season of 1887 with 44 colonies, 40 of them being in good condition, and the other 4 were quite weak. When the white clover began to bloom, the 40 colonies were ready for it, but there was but a small bloom, and of what there was the heads were small and yielded but little nectar. The clover looked sickly, and appeared to be dying out; then the drouth set in, and it appeared to be about all dead.

The linden bloom was early, and it yielded but little, so that from my 44 colonies I got but 4 swarms, and some of the weak colonies dwindled away

until I have but 43, which I put into the cellar on Nov. 18, 1887. About one-third of them were rather light, but had stores enough, I think, to keep them until they are put out in the spring.

I secured but 185 pounds of honey, all in the comb. But few of the colonies that I had set apart for extracting, had any surplus, and that I saved to give to those that were short of stores. In this part of the country the blacker the bee, the less stores they gathered.

I have been handling bees for about 15 years, and the one just past was the poorest season for honey that I have ever experienced. A great many have become discouraged, and were trying to dispose of their apiaries the past fall. What folly! If a farmer loses all of his hogs by cholera, he does not stop trying to raise more; or, if the chinch-bug or grasshopper destroys his crops, he does not cease sowing and planting; but it makes him the more careful. Why should it not be the same with apiculturists, and thus make us the more careful, so that we may be ready to take advantage of a good season when it does come?

Knoxville, 9 Iowa, Jan. 2, 1888.

## STARTERS.

### Suggestions about Fastening Foundation in Sections.

Written for the American Bee Journal  
BY ED. S. EDEN.

After reading Mr. Fox's article, on page 823 of the BEE JOURNAL for 1887, I fail to see that his method of fastening foundation in sections would be very satisfactory, especially to me. I fancy that if Mr. Fox would use a foundation starter that would reach across the section, he would find that his method would prove very unsatisfactory. Very few bee-keepers use as small a starter as does Mr. Fox, 1-inch square.

We will suppose that Mr. Fox uses a starter that is 2 inches deep. I presume that it would require  $\frac{1}{4}$  of an inch to be pressed on to the section, as a means of fastening it. Now  $\frac{1}{4}$  of an inch is  $\frac{1}{2}$  of 2 inches. We will suppose again that Mr. Fox invests \$100 in foundation;  $\frac{1}{4}$  of 100 is \$12.50; which would be very unsatisfactory to me. In Mr. F's case, his loss is \$25, for he uses just one-half the width, and consequently loses one-fourth of the whole amount.

Another objection to fastening foundation by pressure is, that if the sections are allowed to stand any length of time after the starters have been

fastened in them, the foundation will curl out to one side; and if placed on the hive in this shape, the bees will fasten the sides of the foundation to the section in a great many cases, so that it is impossible to get straight combs without separators.

My bees have consumed very little honey so far this winter.

Eastwood, Ont., Jan. 2, 1888.

## CONVENTION DIRECTORY.

1888. *Time and Place of Meeting.*  
Jan. 17, 18.—N. W. Ills. & S. W. Wis., at Rockford, Ill.  
D. A. Fuller, Sec., Cherry Valley, Ills.  
Jan. 18, 19.—Vermont State, at Burlington, Vt.  
R. H. Holmes, Sec., Shoreham, Vt.  
Jan. 17-19.—New York State, at Utica, N. Y.  
G. H. Knickerbocker, Sec., Pine Plains, N. Y.  
Jan. 20.—Haldimand, at Cayuga, Ontario.  
E. C. Campbell, Sec., Cayuga, Ont.  
Jan. 25, 26.—N. E. Ohio, Northern Pa. and W. New York, at Meadville, Pa.  
C. H. Coon, Sec., New Lyme, O.  
Apr. 24.—Des Moines County, at Burlington, Iowa.  
John Nau, Sec., Middletown, Iowa.  
Jan. 24-26.—Eastern New York, at Albany, N. Y.  
John Aspinwall, Sec., Barrytown, N. Y.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

## SELECTIONS FROM OUR LETTER BOX

### Sweet Clover for Bees, etc.—

Nathan Davis, Emporia, 9 Kans., on Dec. 28, 1887, writes:

The bees are wintering well. I commenced the season of 1887 with 25 colonies, and I have increased them to 30 colonies. Bees have done nothing here for two years, on account of the drouths. There has been nothing raised the past year. I have been in Kansas 28 years, and I have never seen times as hard as they are at present. I think that it would pay to sow sweet clover for the bees. I had two acres that bloomed this year, and the bees did well on it. I saved 16 bushels of the seed. I have no trouble to get it to grow.

### Honey for the Liver.—Mr. W. H.

Smith, Mount Salem, Ont., on Jan. 3, 1888, writes:

I have been a careful reader of the AMERICAN BEE JOURNAL for several years, and I have frequently concluded more value from one copy, than the cost of a whole year's subscription. There is one item to which I wish to call the attention of the readers, which I read in the spring of 1886, and that treated of honey as a medicine for the liver. My wife, having for years been a sufferer from liver trouble, concluded

to give honey a thorough trial. At the time she commenced taking the honey, she was very thin in flesh, and a great sufferer, weighing about 100 pounds. In a few weeks she was materially better, and found that she had increased 13 pounds in weight. During the season she regained her health completely, and weighed 142 pounds. She is now a picture of health. I shall be pleased to reply to any one desiring further particulars. It would be quite impossible for me to mention here all the benefits that I have realized from reading the very valuable AMERICAN BEE JOURNAL.

**Varieties of Hardy Raspberries, etc.**—L. C. Woodman, of Grand Rapids, Mich., on Jan. 2, 1888, says:

Mr. C. A. Bunch, in a recent number of the BEE JOURNAL, asked that some Michigan bee-keeper should give some information in regard to hardy raspberries. As I have 10 acres in cultivation, I will try to answer. I would put the Cuthbert, a red variety, at the head for bee-keepers; and then the Souhegan, Tyler and the Ohio, of the black-cap varieties, next to the head.

My bees are in the cellar, and seem to be wintering nicely. My chaff-hive apiary, 3 miles from home, seems to be wintering equally as well.

**Large Crop of Honey, etc.**—J. E. Cady, Medford, Minn., Dec. 31, 1887, writes:

My crop statement for 1887 is as follows: Number of colonies in the spring, 109, which I increased to 118 colonies. I took 8,575 pounds of honey, nearly 600 pounds of it being comb honey, and the balance extracted; 2,635 pounds was from buckwheat and fall weeds. It has been storming for the last three days, and the snow is getting quite deep. Bees in the cellar seem to be quiet and comfortable at a temperature of 48°.

**To the Mountains.**—J. F. Flory, Lemoore, Calif., on Dec. 10, 1887, writes:

Bees have not stored a full crop of honey here; in some places they stored less, and in others more than half a crop, so that on an average it has been about half a crop. We have about 500 colonies, 300 colonies here, and the others some 8 miles away. We shall move them next spring about 50 miles west, up the mountains. I have 25 acres in fruit, and 18 acres in raisins. We have so many yellow-jackets, or wasps, that cut open the fruit, and then the bees suck out the juice. I am

an enthusiastic bee-man, have been such for over 30 years, and so dislike moving my bees from this place; but I see no other remedy at present. I think of keeping perhaps some 20 or 30 colonies here, but the rest I will move.

#### But Little Honey Obtained.

A. H. Thorne, Fountain City, Ind., on Dec. 27, 1887, says:

I started last spring with 22 colonies of bees, bought 6 more Italian colonies, and increased them to 40 good colonies, and introduced eight Carniolan queens successfully, which I will try the coming year. I had to feed my bees for winter, and I did not get honey enough for use in my own home. The name, "extracted honey" is good enough for me.

#### Carrying out Brood, &c.

J. M. Doudna, Alexandria, Minn., on Dec. 29, 1887, writes:

The honey season was very short, only lasting 8 days, from July 4 to 12. Early in June the bees began to carry out brood. I had read that the cause was "no honey," and so it proved. I immediately commenced to feed them, and continued until the linden bloom, and then I obtained 2,700 pounds from 68 colonies. All of it has been sold at good prices. Bee-keeping has paid me better this year than ever before. To me the BEE JOURNAL is worth ten times its cost every year.

#### Hardy Raspberries and Bees.

J. H. Newman, Charlevoix, Mich., on Dec. 26, 1887, writes:

Mr. C. A. Bunch (on page 795 of the BEE JOURNAL for 1887) asks about hardy raspberries, and in reply I would say that the red raspberries are nearly all hardy here, with the temperature sometimes 30° below zero. The best we have are the Cuthbert, Turner, and Shaffer's Colossal, of the red berries. Of the black raspberries we raise the Ohio, Tyler, and Souhegan, which are good and hardy, but not so hardy as the red kinds. The bees seem to work well on all the raspberries, both wild and tame; and they work on the berries as well as the blossoms.

#### Experience with Bees, etc.

A. B. Congdon, South Hadley Falls, Mass., on Dec. 24, 1887, writes:

In the spring of 1886 I bought 2 colonies of bees in box-hives, and not knowing how to transfer them, it was not done until the next spring, so the first year was wasted, just because I

did not post myself before beginning with bees. This year I transferred them into movable frame hives, and doubled them up, as it was a very poor year for honey here also. I did not get any honey, but I am not discouraged, and I think, and know, that if there will be any honey taken in this vicinity next year, that I shall have my share of it.

I have put my bees into the barn in a comfortable place. I had to feed them some sugar syrup before putting them away. I have looked at them, and they are as quiet as can be, and I think they will come out in the spring as bright as need be. They are hybrids, but I intend to Italianize them in the spring.

**Bees did Poorly.**—Wm. Robson, Rolla, Mo., on Jan. 2, 1888, writes:

Buoyant with flattering prospects in the spring of 1887, the supers were arranged, new hives prepared, and every thing made ready for the harvest of 1887, when along came storms from all directions, for a change. Did I get any honey? Yes, but allow me to explain: I left a few cases of honey on the hives over winter, that was gathered during the summer of 1886, but not being filled with comb and honey as desired, they remained until white clover began to bloom. I then removed them, and for the first time in my life I had the pleasure of tasting honey from the bloom of the apple trees. I placed other cases on the hives and awaited results. The "result" is an empty pocket-book, for want of honey to sell. Since I can remember, which is 40 years ago, I have no knowledge of bees doing as poorly as they did the past season. I have spoken to several about their bees, how they were doing, etc.; their reply is, "no good; all dead."

**A Puzzling Colony, etc.**—R. J. Mathews, Riverton, Miss., on Dec. 18, 1887, writes:

I commenced the season with 9 colonies, increased them to 19, and took one from a tree in the woods, so I now have 20 colonies in good condition. I obtained 1,040 one-pound sections of honey, and 250 pounds of extracted honey, of which about 75 pounds was of very poor quality, and the rest was fair. I consider that pretty good for a bad season generally.

To-day it is clear and warm, the temperature is up to 65° out-doors in the shade, and I see from one colony of hybrid bees a large number of drones flying. I have another colony that puzzles me. On Sept. 2 I took its queen (a black one) from them, and



gave it to another queenless colony belonging to my little son, a colony that he got from the woods. In a few days I examined the little boy's colony, and again found it queenless, so I went to my black colony where the queen came from, and found that they had a queen laying, and so I supposed that she had gone back home; but now the bees are nearly all nice Italians, and no young black bees in the hive. Can any one account for this?

#### Properly Attending to Bees.

F. H. McDonald, Star, Idaho, on Dec. 26, 1887, says:

Those who attended properly to their bees have reaped a bountiful crop of honey in this neighborhood. Some late swarms have but little food. One of my neighbors put his bees into the cellar last month, and in a few days he had to take them out again, as they had the diarrhea. He will winter part of them in the cellar, and part on the summer stands. Nearly all the bees kept in this valley are, and have been so far, wintered on the summer stands without any protection, and also with scarcely any loss.

#### Half an Average Crop, etc.

George Spitler, Mosiertown, Pa., on Dec. 26, 1887, writes:

The honey crop in this part of the State is not more than half an average crop, being about 20 pounds per colony, spring count. I started in the fall of 1886 with 20 good colonies, and 3 weak nuclei; in the spring of 1887 I had 18 colonies, 3 queenless ones and 2 nuclei. I had them packed in chaff. Those that were weakest in the fall came through in the best condition. I have 23 colonies packed as they were last year, out-doors, and 11 colonies in the cellar. One colony out-doors and 3 in the cellar are very weak—nothing but nuclei. There was but very little swarming the past season.

#### Good Winter for Bees, etc.

Joshua Bull, Seymour, Wis., on Jan. 5, 1888, writes:

On page 823 of the BEE JOURNAL for 1887, I am made to say that basswood yielded continually "from July 4 to July 27 inclusive," which is not according to the facts in the case. I intended to say, "from July 4 to July 7" (not 27).

My bees were in excellent condition last fall to enter their long winter repose, the colonies being very populous, with an abundance of stores. The weather, during November and December, was unusually mild for that

time of the year in this latitude; and although the mercury was below zero several times, it was for a few hours only. The year 1887 closed with a driving snow-storm, which continued into the beginning of the New Year. When the storm cleared away, it turned cold, and on the morning of Jan. 3 the thermometer indicated 24° below zero. But it is quite mild again to-day, being 22° above zero. Somehow I feel a sort of premonition that this is going to be a favorable winter for bees, and I sincerely hope that the results next spring will be such as will justify that feeling.

## BEE CONVENTIONS.

#### Nebraska State Convention.

The next meeting of the Nebraska State Bee-Keepers' Association will be held on Jan. 11, 12, and 13, 1888, in Red Ribbon Hall, at Lincoln, Nebr. The Lindell Hotel will give reduced rates to members. Those who come should get a receipt from their home railroad agents on starting to Lincoln, as railroad companies require fifty receipts to entitle members to reduced rates. President Ryan requests all members to have questions ready for the first evening, so that they can be arranged in order. The programme is as follows:

What are the essential points in locating an apiary?—J. G. Hodges and J. L. Blanchard.  
Apiculture as a profitable and permanent occupation.—A. D. Keller and C. Coelary.

How does bee-keeping pay compared with other occupations?—R. E. Leach and J. Rodgers.  
How to obtain the most honey in the best marketable shape.—Mrs. J. N. Heater and M. Tower.

How much, if any, comb foundation should be used?—E. Kretschmer and E. Tower.  
Diseases of bees, their causes and remedies.—E. M. Hayhurst.

Is spring stimulating advisable? If so, with what?—T. L. Von Dorn and W. J. Lynch.

How best to prepare honey to exhibit for sale or for show.—Mrs. J. N. Heater and E. W. Whitcomb.

Which is more profitable, comb or extracted honey?—A. Johnson and M. D. Abbott.

Increase, natural or artificial?—R. V. Muir and J. F. Polk.

Should bees be frequently examined? and at what temperature should the atmosphere be?—Mrs. L. Marshall and Jas. Jardine.

Spring work with bees.—E. M. Hayhurst.  
Fall breeding and spring dwindling.—J. N. Heater and E. Kretschmer.

Honey-plants of Nebraska.—Professor C. E. Bessey, of the State University.

Rearing queens and clipping their wings.—J. M. Young. H. N. PATTERSON, Sec.

#### Vermont State Convention.

The 14th annual convention of the Vermont Bee-Keepers' Association will be held at the Van Ness House at Burlington, Vt., on Wednesday and Thursday, Jan. 18 and 19, 1888. The order of exercises is as follows:

WEDNESDAY EVENING, 1:30 P. M.—Convention called to order by the President. Reading of the minutes of the last meeting. Reading of the Constitution, etc.

At 3:15.—A paper by W. H. Wheatley, St. Johnsbury, on "Vermont Bees." Followed by discussion of the subject by the convention.

At 2:45—"Experience of Fifteen Years in Bee-Keeping," by H. B. Isham, New Haven.

At 3:00—Discussion: "Is it advisable to insert empty combs in the centre of brood-

nests for the purpose of spreading brood in the spring?" Opened by F. M. Wright.

At 3:30—Discussion: "What is the best method to prevent an increase in colonies?" Led by J. E. Crane.

WEDNESDAY EVENING, 6:45—Appointment of committees.

At 7:00—Discussion: "Bee-keeping in Vermont; does it pay?" "Its hindrances," N. G. Webster, Bakersfield. "Its Expenses," J. H. Larabee, Larabee's Point. "Its profits," Geo. Beecher, Essex. "As a business," H. L. Leonard, Brandon.

At 1:15—Essay: "The pleasure and difficulties of bee-keeping," by a lady bee-keeper.

At 8:15—Essay: "Should women keep bees and join the Bee-Keepers' Association?" by a lady bee-keeper.

THURSDAY FORENOON, 9:00—Reports of the Secretary and Treasurer. Reports of committees, organization, etc.

At 10:15—Discussion: "Is it profitable to use full sheets of foundation in the brood-chamber?" Opened by F. H. McFarland, St. Albans.

At 10:45—Question Drawer. A. E. Manum, Bristol.

At 11:15—Discussion: "Marketing honey." Led by J. E. Crane.

Adjournment. R. H. HOLMES, Sec.

The Vermont Association are to be congratulated upon the nice programme of 12 pages which they have issued.

#### Ohio State Convention.

The fifth annual Ohio State Bee-keepers' Convention will be held in the United States Hotel, on the corner of High and Town Sts., Columbus, O., on Jan. 10 and 11, 1888. An interesting programme will be arranged. Reduced rates at the hotel are \$1.50 for each person, double, or \$2.00 per day if single. There will be reduced rates of travel, particulars of which will be given later. It is desirable to know who can be present. Will you kindly notify me by postal card, at Bluffton, Ohio. The following is the programme:

TUESDAY, 9 A. M.—Reading the minutes of last meeting. Receiving members and collecting dues. Reports of the Secretary and Treasurer, and standing committees.

Bee-conventions, how to make them a success, and their value to bee-keepers.—A. I. Root.

Discussion on the Sectional Brood Chamber and its advantages.—Led by Dr. G. L. Tinker. Reversing, and has it come to stay?—C. M. Kingsbury.

TUESDAY, 1 P. M.—Discussion on Bee-keeping in connection with other pursuits.—Led by F. A. Eaton.

Bee-keeping for women.—Mrs. Jennie Culp.  
Bee-keeping as an exclusive pursuit.—Dr. C. C. Miller.

TUESDAY, 7 P. M.—Wood vs. tin separators: is it profitable to dispense with either?—Dr. Bessey. T-supers and other surplus arrangements in connection with bee-spaces.—E. R. Root.

Discussion on, *Resolved*, That bee-keeping as a business is more profitable than farming. Opening of the question-box.—S. R. Morris.

WEDNESDAY, 9 A. M.—Extracted honey: its production, and the best method of marketing it.—Dr. A. B. Mason.

The commission man and his relation to the honey-producer, as affecting the sale and price of honey.—Chas. F. Muth.

WEDNESDAY, 1 P. M.—Tiering-up: its advantages.—J. W. Newlove.  
Freezing bees.—C. E. Jones.

In-door vs. out-door wintering of bees, and the advantages of the former.—H. R. Boardman.

Election of officers for the ensuing year.

FRANK A. EATON, Sec.

Hilton's new pamphlet on Comb Honey Production has been reduced in price to 5 cents. For sale at this office.



## CONVENTION NOTICES.

The Eastern New York Bee-Keepers' Association will meet at Jan. 24, 25 and 26, 1888, in Agricultural Hall, at Albany, N. Y. Every one is welcome. We are sure to have a pleasant and profitable time.  
JOHN ASPINWALL, Sec.

The Des Moines County Bee-Keepers' Association will hold its next meeting on April 24, 1888, at Burlington, Iowa.  
JOHN NAU, Sec.

The annual convention of the Vermont State Bee-Keepers' Association will be held at the Van Ness House, in Burlington, Vt., on the Jan. 18 and 19, 1888.  
R. H. HOLMES, Sec.

The Ontario Bee-Keepers' Association will hold its annual meeting at Woodstock, Ontario, on Tuesday and Wednesday, Jan. 10 and 11, 1888.  
W. COUSE, Sec.

The Hardin County Bee-Keepers' Association will meet at the Court House in Eldora, Iowa, on the second Saturday in each month, at noon (12 o'clock), until further notice.  
J. W. BUCHANAN, Sec.

The Cortland Union Bee-Keepers' Association will hold their annual meeting at Cortland, N. Y., on Tuesday, Jan. 10, 1888, for the election of officers and to transact such business as may come before the meeting. All bee-keepers are invited.  
R. L. WEAVER, Sec.

The annual meeting of the Northwestern Illinois and Southeastern Wisconsin Bee-Keepers' Association will be held in G. A. B. Hall, corner of State & North Main Sts., in Rockford, Ill., on Jan. 17 and 18, 1888. Dr. Miller will be present, and a good programme is in course of preparation.  
D. A. FULLER, Sec.

The Northeastern Ohio, Northern Pennsylvania and Western New York Bee-Keepers' Association will hold its ninth annual convention in the Commercial House Parlor, in Meadville, Penn., on Wednesday and Thursday, January 25 and 26, 1888. Reduced hotel rates have been secured.  
C. H. COON, Sec.

**Robert's Rules of Order** for deliberative assemblies, published by S. C. Griggs & Co., Chicago, is "a gem" in appearance, and an invaluable guide for those who are called to preside over conventions of bee-keepers and others. It has a table, covering two pages, which will aid a chairman to decide 200 questions of importance, without turning a leaf. Price 75 cents.

**The Apiculturist** for January came in good time, and is as usual full of good things of interest to every apiarist. "Prevention of Increase" is the chief topic in this number, and it contains three good articles on that subject. The BEE JOURNAL and the "Apiculturist" for 1888 can be obtained for \$1.80.

Please to get your Neighbor who keeps bees, to also take the AMERICAN BEE JOURNAL. It is now SO CHEAP that no one can afford to do without it.

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell lots of it.

## Business Notices.

## OUR CLUBBING LIST.

We supply the American Bee Journal one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	Club
The American Bee Journal	1 00	1 00
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	1 50	1 40
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 80
Canadian Bee Journal	2 00	1 80
Canadian Honey Producer	1 40	1 30
The 7 above-named papers	5 40	5 00
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 00	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Simmons' Non-Swarming	1 50	1 25
Western World Guide	1 50	1 30
Heddon's book, "Success"	1 50	1 40
A Year Among the Bees	1 75	1 50
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Iowa Homestead	2 00	1 90

One yearly subscription for the AMERICAN BEE JOURNAL must be ordered with each paper or book, in order to take advantage of the prices named in the last column.

We pay 20 cents per pound, delivered here, for good Yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

We supply Chapman Honey-Plant seed at the following prices: One ounce, 40 cts; 4 ounces, \$1; 1/4 pound, \$1.75; 1 lb., \$3. One pound of seed is sufficient for half an acre, if properly thinned out and re-set.

**Sweet Clover**, (*Melilotus alba*), furnishes the most reliable crop of honey from July until frost, and at the same time it furnishes the most delicious honey, light in color, and thick in body. It may be sown in waste places, fence corners, or on the roadside, at any time of the year.

Sow two years running, on the same land, and the honey crop will be without intermission. Money invested in Sweet Clover Seed will prove a good investment. The Seed may be obtained at this office at the following prices: \$6.00 per bushel (60 lbs.); \$1.75 per peck, or 20 cents per pound.

**Yucca Brushes** are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

**Red Labels** for one-pound pails of honey, size 3x4 1/4 inches. We have now gotten up a lot of these Labels, and can supply them at the following prices: 100 for \$1.00; 250 for \$1.50; 500 for \$2.00; 1,000 for \$3.00; all with name and address of apiarist printed on them—by mail, postpaid.

## Honey and Beeswax Market.

## CHICAGO.

**HONEY.**—We quote: White clover 1-lb. sections 18@20c.; 2-lbs., 16@18c.; dark 1-lb. 17@19c.; 2-lbs. 15@16c. Extracted, firm at 7@10c., depending upon the quality, and style of package. Dark, 2 or 3 cts. below above quotations. Receipts light and demand fair.

**BEEFWAX.**—22@23c.  
Dec. 20. S. T. FISH & CO., 189 S. Water St.

## CHICAGO.

**HONEY.**—Prices range from 18@20c. for best grades, with light demand; 2-lb. sections, 15@16c. Dark is not wanted. Extracted is steady at 7@10c., according to style of package.

**BEEFWAX.**—20@23c. R. A. BURNETT,  
Dec. 7. 161 South Water St.

## DETROIT.

**HONEY.**—Best white in 1-lb. sections, 19@20c. Extracted, 11@12c. Demand brisk.

**BEEFWAX.**—21@23c.  
Dec. 13. M. H. HUNT, Bell Branch, Mich.

## CLEVELAND.

**HONEY.**—Best white 1-lb. sections sell at 18@20 cts. Extracted, 7@9c. Demand small.

**BEEFWAX.**—22@23c.  
Dec. 15. A. C. KENDEL, 115 Ontario St.

## NEW YORK.

**HONEY.**—We quote: Fancy white in 1-lb. sections, 16@18c.; the same in 2-lbs., 14@16c.; buckwheat 1-lb., 11@12c.; 2-lbs., 10@11c. Of grades 1@3c. per lb. less. White extracted, 8@9c. Market dull.

**BEEFWAX.**—22@23c.  
Dec. 20. MCCAUL & HILDRETH BROS.,  
28 & 30 W. Broadway, near Duane St.

## KANSAS CITY.

**HONEY.**—We quote: Choice white 1-lb., 18@20c.; dark, 16@18c.; choice white 2-lbs., 18c.; dark, 15 to 16c. Extracted, white, in 60-lb. tin cans, 9c.; in barrels, 8c.; dark, in barrels, 5@6c. California 2-lb. white comb, 18c.; dark, 16c. Extracted, white, in 60-lb. cans, 8@9c.; amber, 8c.

**BEEFWAX.**—No. 1, 20c.; No. 2, 16@18c.  
Dec. 19. CLEMONS, CLOON & CO., cor 4th & Walnut

## ST. LOUIS.

**HONEY.**—Choice comb, 18@20c.; latter price for choice white clover in good condition. Strained, in barrels, 6@6c. Extra fancy, of bright color and in No. 1 packages, 1/2-cent advance on above. Extracted, in bbls., 6@7c.; in cans, 7 to 8c.—Short crop indicates further advance in prices.

**BEEFWAX.**—20c. for prime.  
Dec. 19. D. G. TUTT & CO., Commercial St.

## CINCINNATI.

**HONEY.**—We quote extracted at 4@5c. per lb. Choice comb, 16@20c., in the jobbing way. The demand for extracted exceeds arrivals, and for comb the demand is tame.

**BEEFWAX.**—Demand good—20@22c. per lb. for good to choice yellow, on arrival.  
Dec. 12. C. F. MUTH & SON, Freeman & Central Av.

## NEW YORK.

**HONEY.**—We quote: Fancy white 1-lb. sections, 17@19c.; fancy 2-lbs., 15@16c. Lower grades 1@2c. per lb. less. Buckwheat 1-lb., 11@12c.; 2-lbs., 10@11c. Extracted, white, 9@10c.; buckwheat, 6@7c. Demand has slackened some, and to make sales we must shade above prices. About Jan. 15 we expect a more active demand.

**BEEFWAX.**—20@22c. Demand good, supply fair.  
Dec. 31. F. G. STROHMMEYER & CO., 122 Water St

## PHILADELPHIA.

**HONEY.**—Fancy white 1-lb., 18@19c.; fair 1-lb. 17c.; dark 1-lb. are slow sale at 14@15c.; fancy 2-lbs., white, 15@16c.; buckwheat fancy 1-lb., 13@14 cts.; common, 12c. Prices tend downward.

**BEEFWAX.**—23@24c.  
Dec. 11. ARTHUR TODD, 2122 N. Front St.

## MILWAUKEE.

**HONEY.**—Choice white 1-lb., 20c.; fair, 18@20c.; 2-lbs., 18@19c.; 3-lbs., 16@18c. White extracted in kegs or half-barrels, 9@9 1/2c.; in pails or cans, 9 1/2 to 10c.; amber, in 1/2-barrels, 8 1/2@9c.; dark in kegs and barrels, 7@7 1/2c. Demand good, supply fair.

**BEEFWAX.**—22@23c.  
Dec. 15. A. V. BISHOP, 142 W. Water St.

## SAN FRANCISCO.

**HONEY.**—We quote: White to extra, 15@18c.; amber, 10@13c. Extracted, white liquid, 7@7 1/2c.; amber and candied, 5 1/2@6 1/2c. Market quiet.

**BEEFWAX.**—20@24c.  
Dec. 31. SCHACHT & LEMCKE, 123-124 Davis St

## BOSTON.

**HONEY.**—New crop, 1-lb. sections, 18@20c.; 2-lb. sections, 17@18c. Extracted, 6@9c. The market is not very brisk and sales are only fair.

**BEEFWAX.**—25 cts. per lb.  
Dec. 10. BLAKE & RIPLEY, 87 Chatham Street.

## SAN FRANCISCO.

**HONEY.**—We quote: White comb, 17@19c.; amber, 12@15c. Light amber to white extracted, 7 1/2@8c.; amber, dark and candied, 6 1/2@7 1/2c. Market firm and stocks light.

**BEEFWAX.**—22@23c.  
Dec. 12. O. B. SMITH & CO., 423 Front St.